REMARKS

The foregoing amendments to the claims are responsive to the August 27, 2003, Office Action. Applicants respectfully request reconsideration of the present application in view of the foregoing amendments and the following remarks.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Statutory Double Patenting Rejection of Claims 21-23 Under 35 U.S.C. 101

The Examiner rejected Claims 21-23 under 35 U.S.C. 101 as being identical to Claims 1-3 of U.S. Patent No. 6,371,921 (the '921 patent). Applicants have amended Claim 20 to recite a processor which determines when to employ the input calibration signal to recalibrate one or more of a plurality of parameters based on a change in a state variable related to at least one of said parameters. Claim 21 has been amended to recite that a change in said state variable is deduced at least in part from a change in a trigger parameter. Claims 22-23 depend from Claim 21, and thus the double patenting rejection of Claims 22-23 is traversed by the amendment to Claim 21. Accordingly, Applicants request that the Examiner withdraw the rejection of Claims 21-23. Applicants assert that Claims 20-23 are allowable, and Applicants request allowance of Claims 20-23.

Obviousness-Type Double Patenting Rejection of Claims 12, 15, 17 and 20

The Examiner rejected Claims 12, 15, 17 and 20 under the judicially-created doctrine of obviousness-type double patenting as being unpatentable over Claims 1-9 of the '921 patent. Applicants are prepared to file an appropriate terminal disclaimer to traverse this rejection should Claims 12, 15, 17, and 20 be allowed in substantially their present form.

Rejection of Claims 1-11, 13, 14, 19, and 21-23 Under 35 U.S.C. 112 first paragraph

The Examiner rejected Claim 1-11, 13, 14, 19, and 21-23 under U.S.C. 112, first paragraph, asserting that the claims fail to comply with the enablement requirement. Specifically, the Examiner requests clarification of as to how a change in the "pressure volume" relationship is measured. Applicants assume the Examiner's use of the word "volume" is inadvertent and that the Examiner was referring to a pressure-velocity relationship (as recited in Claims 1-11, 12, 14, and in amended Claims 19 and 21-23).

The Examiner is directed to the published specification, which reads in part:

> [0084] Step 734 determines if the calibration values are still valid. This determination can be based on many factors including the time since the last calibration, that the linearity of the pressure-velocity relationship is outside of a reliable range, determination by medical personnel that a new calibration is desired or other factors. As an example of these factors, the preferred embodiment provides user settable calibration times of 2, 5, 15, 30, 60 and 120 minutes, and could easily provide more. Moreover, the curve upon which the pressure is determined is piecewise linear with some degree of overall nonlinearity. If the processor 100 determines that the data is unreliable because the linear region is exceeded, the processor will initiate a calibration step. In one embodiment, an "Internal Consistency" trigger technique is employed to determine the validity of the data and to selectively trigger recalibration. This is called Internal Consistency Analysis and is described under that heading below. Finally, the calibration can be initiated manually if the operator desires a calibration step. A button 104 is provided on the processor 100 for initiating such calibration manually.

Additional enabling disclosure is provided in the specification. The specification clearly teaches one of ordinary skill in the art how a change in the pressure-velocity relationship is calculated. Accordingly, Applicants request that the Examiner withdraw the rejection of Claims 1-11, 13, 14, 19, and 21-23. Applicants assert that Claims 1-11, 13, 14, 19, and 21-23 are allowable, and Applicants request allowance of Claims 1-11, 13, 14, 19, and 21-23.

The Examiner asserts that the current subject mater has support in the immediate parent application but not in any of the other parent applications. Applicants respectfully point out that support is found in applications prior to the immediate parent application, and thus the effective filing date precedes November 1, 1999.

Rejection of Claims 12, 15, 17, and 20 Under 35 U.S.C. 102(e)

The Examiner rejected Claim 12, 15, 17, and 20 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,190,325 to Narimatsu.

Narimatsu teaches a system that uses an inflatable cuff adapted to apply a pressing pressure to a body portion of a living subject and which measures at least one blood-pressure value of the living subject by changing the pressing pressure of the inflatable cuff. In between measurements using the cuff, Narimatsu also uses an "estimating means for iteratively estimating a blood-pressure value of the living subject." Narimatsu uses a very simple timeout scheme wherein the blood pressure cuff is used every 20 minutes to take a blood pressure reading. Specifically, Narimatsu teaches "[a]t Step SB12, the CPU 29 judges whether the predetermined period T_{BP} (e.g., 20 minutes), that is, the calibration period, has passed after the last BP measuring operation was carried out at Step SA5 of FIG. 7." (Column 12 at lines 35-38). By

contrast, Applicants teach a more sophisticated system that involves more than a simple timeout scheme.

Regarding Claim 12, Narimatsu does not teach or suggest receiving a calibration signal from a calibration device configured to provide an accurate representation of the blood pressure of a patient, receiving a continuous signal from a sensor configured to detect one or more attributes of a perturbation of an artery of the patient, calibrating, with the calibration signal, one or more of a plurality of parameters derived from at least the continuous signal, calculating the blood pressure of the patient from one or more of the plurality of parameters, tracking one or more of the plurality of parameters, and when the one or more tracked parameters exceed a threshold, recalibrating the one or more calibrated parameters.

Regarding Claim 15, Narimatsu does not teach or suggest the method of Claim 12, wherein the one or more tracked parameters comprises a trigger parameter.

Regarding Claim 17, Narimatsu does not teach or suggest the method of Claim 12, wherein the one or more tracked parameters comprises a change in a trigger parameter.

Regarding Claim 20, Narimatsu does not teach or suggest an input calibration signal from a calibration device configured to provide an accurate representation of the blood pressure of a patient, an input noninvasive sensor signal from a sensor configured to detect one or more attributes of a perturbation of an artery of the patient, and a processor which determines when to employ the input calibration signal to recalibrate one or more of a plurality of parameters based on a threshold value of at least one of said parameters, wherein the processor uses the plurality of parameters and the input noninvasive sensor signal to continuously calculate the blood pressure of the patient.

Accordingly, Applicants assert that Claims 12, 15, 17, and 20 are allowable, and Applicants request allowance of Claims 12, 15, 17, and 20.

Summary

In view of the above amendments and arguments, Applicants assert that Claims 1-23 are in condition for allowance, and Applicants request allowance of Claims 123. If there are any remaining issues that can be resolved by a telephone conference, the Examiner is invited to call the undersigned attorney at (949) 721-6305 or at the number listed below.

Respectfully submitted,

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Dated: Nov 17, 2003

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